

Activity Title: Outsourcing Jobs

Unit: Contending With Change and Growth

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Description and Purpose: The lab is designed to help students understand outsourcing. In this lab, the students will create linear graphs for given sets of data values and make predictions of the number of jobs that will be outsourced in a given year.

Time Needed: The students will complete this lab in one to two hours during class and working in groups of two. Time will be needed outside of class for reading articles and writing about them.

Materials For Activity:

- ❖ Graphing/scientific calculator
- ❖ Job outsourcing data information sheet
- ❖ Internet Access

Procedure: The students will be placed in groups of two. They will be required to examine the data that is given and answer the questions that follow. The students will use the data to make predictions of the future of jobs in the United States. Students will also read articles about the effects of outsourcing on the US and countries in Africa.

Assessment:

Question(s)	Recommended Points
1	10
2	15
3	15
4	10
5	15
6	15
7	10
8	10
Total Score	100 points

Resources:

- <http://fpc.state.gov/documents/organization/46688.pdf>
- <http://economyincrisis.org/content/the-outsourcing-of-american-jobs-hurts-the-economy-on-every-level>
- <http://www.thrivenc.com/whync/global-focus>
- <http://diginomica.com/2014/12/02/africa-outsourcings-false-dawn/>
- <http://www.usatoday.com/story/money/business/2014/04/04/ozy-freelance-digital-africa-outsourcing/7298787/>
- <http://www.theafricareport.com/North-Africa/outourcing-the-indian-connection-and-africa.html>

MAT 143 Lab: Contending With Change and Growth -- Outsourcing Jobs

Outsourcing occurs when one business contracts out to another to provide goods or services rather than handling production of those goods or services in-house. Sometimes, both businesses are in the same country, such as a temporary agency providing a fill-in worker to a business with an employee away on family leave. Often, however, outsourcing is a multinational affair. Many nations, the United States included, are home to both types of businesses: those which contract out for goods and services with companies in other nations and those companies which provide goods and services to foreign businesses.

In this lab, you will use data to examine the effects of outsourcing on the US, North Carolina, and Africa.

The data in the table below shows the number of US service sector jobs by department that have been projected to move overseas, from 2003 to 2008. Use this information to answer the questions below.

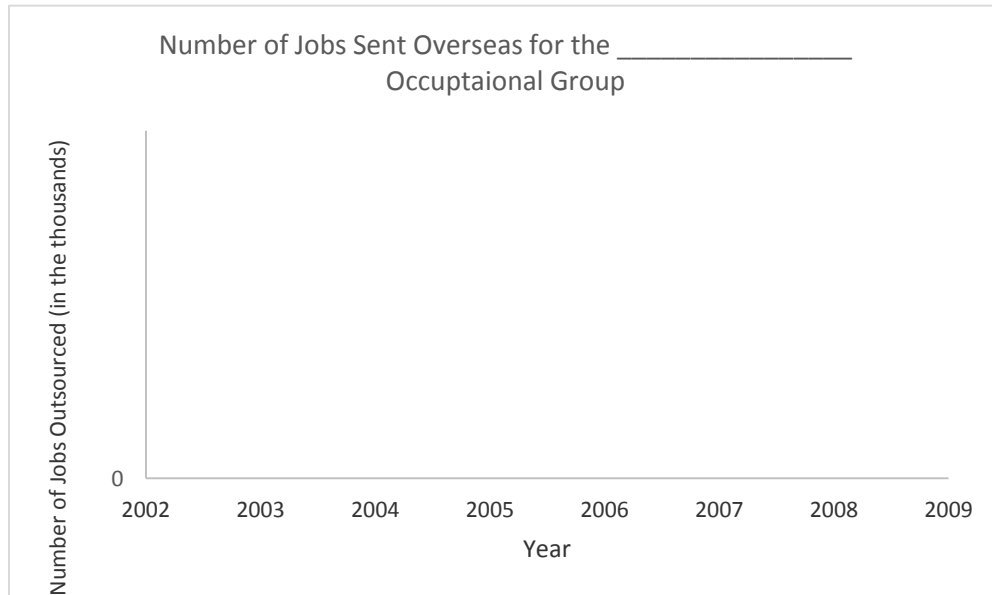
Table 1. Number of U.S. Service Sector Jobs Projected to Shift Offshore by Occupational Group Through 2008
(numbers in thousands)

Occupational group	2003	2004	2005	2006	2007	2008
Administrative support	146	256	410	475	541	616
Computer	102	143	181	203	228	247
Business and financial operations	30	55	91	105	120	136
Management	3.5	15	34	42	48	64
Sales	11	22	38	47	55	67
Architecture	14	27	46	54	61	70
Legal	6	12	20	23	26	29
Life sciences	.3	2	4	5.5	6.5	9
Art, design and related	2.5	4.5	8	9	10	11
Total	315	540	830	960	1,100	1,200

Source: Adapted by CRS from John C. McCarthy, *Near-Term Growth of Offshoring Accelerating*, Forrester Research, Inc., May 14, 2004.

Questions:

1. What are the independent and the dependent variables for these data?
2. Identify the occupational group that has had the most jobs sent overseas each year: _____
 - a. What is the total number of jobs in this sector sent overseas during this time period?
 - b. Complete the scatterplot for this occupational group below. You'll have to add the vertical axis values.



- c. What is the average growth rate of for this group? (use the data from years 2007 and 2008.)
 - d. Use extrapolation to predict the number of jobs from this sector that will be sent overseas in the year 2013.
 - e. Why do you think that this job sector has had so many jobs sent overseas? Give two reasons.
3. Observe the total amounts of jobs that have been moved overseas from 2003 to 2008.
 - a. What is the average growth rate for the total amounts between the years of 2003 and 2004?
 - b. Use extrapolation to predict the total number of jobs that were outsourced in the year 2002.
 - c. Use extrapolation to predict the total number of jobs outsourced in the year 2000. Does this number seem feasible? Explain!
 - d. What is the average growth rate for the total amounts between the years of 2007 and 2008?
 - e. Use extrapolation to predict the total number of jobs that will be outsourced in the year 2020.
 - f. Based on the rate of growth from 2007 and 2008, create a linear model to describe the total amount of jobs outsourced overseas since 2008. Use this model to find when the amount of jobs outsourced will reach 3 million. State the year.
 - g. How far do you think the linear model that you found in part *f* might extend? In other words, do you think that it is realistic to make predictions about the number of jobs sent overseas many years from now? Explain.

4. Again, observe the total amounts of jobs that have been moved overseas from 2003 to 2008. Use these totals to complete the following table:

Year	Total Jobs Sent Overseas	Percent Change in Jobs
2003		
2004		
2005		
2006		
2007		
2008		

- What do you notice about the percent change as time passes?
- Do you think that this trend actually continued beyond 2008? Explain your answer.

In the preceding exercises, we've seen some of the negative impact of outsourcing. However, outsourcing, like most issues, has multiple sides.

- The United States isn't the only country whose businesses outsource jobs. Businesses in other nations often outsource as well. Take a look at the graphs on pages 5 – 8 in the paper titled Global Trends in Outsourcing and Their Impact: <https://www.wpi.edu/Pubs/E-project/Available/E-project-042711-161931/unrestricted/MarvinIQP.pdf>. Answer the following questions.
 - What were the top three destination countries by estimated jobs in business support services in 2009 according to the graph on page 5?
 - What were the top three destination countries by estimated jobs in production in 2009 according to the graph on page 6?
 - What were the top three destination countries by estimated jobs in R&D in 2009 according to the graph on page 7?
 - What were the top three destination countries for investment by Chinese and Indian companies in 2009 according to the graph on page 8?
 - What is the only country on all four of the lists above? Does this surprise you? Explain your answer.
- Many foreign companies are investing in North Carolina. Take a look at the information at <http://www.thrivenc.com/whync/global-focus> and answer the following questions.
 - Name three industries in North Carolina that are attracting foreign investment and a least one company in each category doing the investing.
 - Why do you think these companies are investing in North Carolina? Support your argument with facts.
 - How are these industries and companies benefitting North Carolina? Support your argument with facts.

7. Let's take a look at how outsourcing affects other parts of the world. Here are some articles about outsourcing and Africa.

- <http://diginomica.com/2014/12/02/africa-outsourcings-false-dawn/>
- <http://www.usatoday.com/story/money/business/2014/04/04/ozy-freelance-digital-africa-outsourcing/7298787/>
- <http://www.theafricareport.com/North-Africa/outourcing-the-indian-connection-and-africa.html>

Based on these articles, how is outsourcing helping African countries? What are some of the challenges African countries face when attempting to attract foreign companies? Do you think outsourcing is overall beneficial to African nations? Explain your response in complete sentences and back up your conclusions using the articles.

8. What did you learn about outsourcing from this lab? Did it shift your view of outsourcing? Explain your response in a short paragraph.